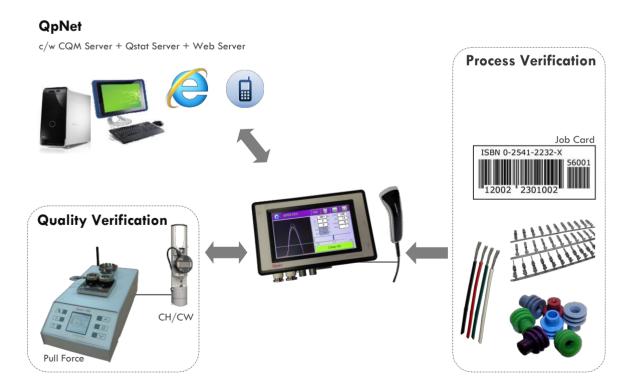


**Qpex** – in short for **Q**uality & **P**rocess **ex**pert, was designed using our proven SL series CFM technology that was endorsed by Automotive Manufacturer worldwide to guarantee 100% quality monitoring. We have expanded the connectivity to allow real-time process monitoring to assure setup was done according to Engineering requirements and the Quality Data for every production crimp is recorded for traceability purpose.

# ...not just a CFM but a **Quality** and **Process Verification** Expert



**CONTROL AT YOUR FINGERTIPS** & PROCESS EXPERT – Qpex

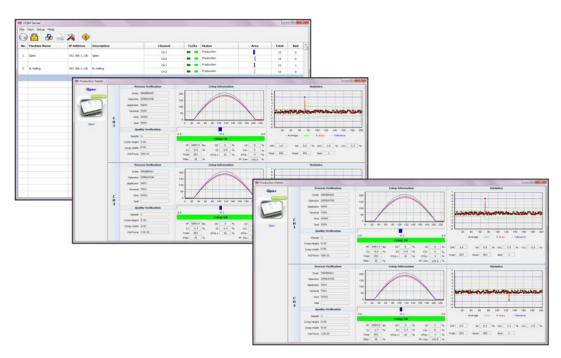
#### **QpNet**

- In short for Quality & Process Network.
- Engineering data are converted to simple csv file as database stored in the server. This database will be synchronized with Qpex once the network is up. During production, the system will compare for a valid Wire-End against the database to prevent erroneous setup.
- Thereafter, the system will compare the setup crimp specifications against Engineering requirements in terms of Crimp Height / Crimp Width / Pull Force before Qpex releases the machine for production.
- All production crimps are recorded according to users' definition on how they would like to store these data.



#### **CQM** Server

- Supports up to 32x Crimp Force Monitors.
- > Quick overview of CFM systems on production floor and zoom in for details information.
- Selectable Quality Data storage, ALL BAD crimps, ALL GOOD & BAD crimps, Partial GOOD and ALL BAD crimps, etc. for maximizing storage capacity.
- > Built-in SPC viewer allows completed order capability to be reviewed quickly.
- Individualized tolerances setting for CFM based on engineering optimization.
- > Process Verification handling to support older systems such as SL Carline+ and SL Starlite.



## **Qstat Server**

- Supports up to 10x Qstat-100 "Quality Station".
- > Queue up to 20x jobs per Qstat, allowing random job pick.
- Fully integrated with QpNet for Quality verification via Qstat-100 to ensure both Crimp Height and Pull Force specifications are met.
- Supports multiple clients like CQM Server, Qpex, SL Vision 3 & Qstat PC Software.

			V						
	Qstat L	st							
25	No	Qstat Name	IP Address	Communic	cation Status	Jobs Available			
	1	Qstat1	192.168.1.130	Online		4			
	2	Qstat2	192.168.1.131	Onine		3			
	3	Qstat3	192.168.1.132	Online		1			
	4	Qstat4	192.168.1.133	Online		0			
	5	Qstat5	192.168.1.134	Online		0			
	6	Qstat6	192.168.1.135	Online		0			
	7	Qstat7	192.168.1.136	Online		0			
	8	Qstat8	192.168.1.137	Online		0			
	9	Qstat9	192.168.1.138	Online		0			
	10	Qstat10	192.168.1.139	Online		0			
	Job Lis	System Name	Channel Name	Job Status	Order Name	Operator	Applicator	Terminal	Wire
	-	Ostat1							
		Opex	CH1	Sent	ORDER001	OPERATOR1	A001	T001	W001
		Opex	CH2	Sent	ORDER002	OPERATOR2	A002	T002	W002
		SL Carline+	CH1	Sent	ORDER001	OPERATOR1	A001	T001	W001
				Sent	ORDER002	OPERATOR2	A002	T002	W002
	E	SL Carline+	CH2	Sent					
			СН2	Sent					
		Qstat2	CH2	Sent	ORDER001	OPERATOR1	A001	T002	W002
						OPERATOR1 OPERATOR2	A001 A002	T002 T001	W002 W001
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#### Web Server

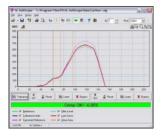
- Embedded web-server that allows remote accessibility of Production Status & Quality Data information through web browser.
- Access and monitors the production status ANYTIME, ANYWHERE using Explorer/Safari via your Notebook, Tablet and Smartphone device.

Order : ORDER001			7/11/2013 1:27 PM 7/11/2013 1:53 PM	
Wire End ID : Wire End Description : Terminal ID : 32100080	Wire ID : 31400127 ( Wire Description : AVSS 0.50mm Seal ID : 3560006	Operator : Good : Bad :		
	2.2U/BS2 Seal Description : DJ7000Y-2.2-2/B2			Start : 7/11/2013 1/27 PM
				End: III
olerance		_	09	erator: Operator
ATOL+: 5.0 %	Order : ORDER001	27		Good: 15 Bad: 0
	Wire End ID : Wire Description: AVSS			Badi 0 Total: 15
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Crimp Height 1.110 mm	Wre End Description i Seal ID: 32100080 Seal Description : DJ70	001-2-2-2-2		
Crimp Width: 1.930 mm	Weie Extra de societani en esta de societani esta de societani en esta de societani			Z2TOL . 30%
Min Pull Force: 50.0 N	16		Z1TOL+: 25%	Z2TOL-: 30 %
uality Verification	Tolesance STOL* 10% File? 1	0.%	Z110L- 90%	
Crimp Height Crimp	ATOL+: 5.0 % STOL-: 4 %			
1 0.000 mm 0.00			-	and the second s
	(mm 0.00.0 mm)			
	Speculation (+0.0.50 mm) Crimp Height: 1.110 mm (+0.0.50 mm/-0.056 mm) Crimp Webh: 1.330 mm (+0.0.50 mm/-0.056 mm)		a state	Martin Star
Force(N) Pull Force	Crimp Width: 1,330 mm		1977	FEFT
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#### **Report Generation**

- With the vast Quality Data recorded on the QpNet system, analysis can be done easily to optimize processes.
- Easy generation of Force Profile and SPC reports.
- All reports can be exported to PDF file and many other types of file format.







## **Monitoring Functions**

Individual crimping process is monitored for the following defects:

- Missing strands
- Incorrect crimp height
- Wire not completely in the wire crimp
  Strands outside terminal
- Incorrect wire gauge
- Missing terminal

# **Enhanced Analysis**

In addition to the Area and Signature analysis, the following evaluations are included:

- Zone 1
- > Zone 2
- Peak Force

## **HEADROOM**wizard

Headroom analysis has never been so easy, simply run the HEADROOMwizard and produce good and bad crimps. The wizard will calculate the headroom and relative dispersion automatically. A quick tool to determine whether the process can be monitored or not.

# **Technical Specifications:**

- Channels: Single or double
- Trigger (Optional): Proximity
- ➤ Tolerance sets: 8
- Outputs: stop, clock, good & bad
- Inputs: learn & reset etc.
- Interface: USB for Barcode Scanner. Ethernet for connecting to QpNet
- Display: Colour LCD with Touchscreen
- Power supply: 12VDC, 15Watts
- ➢ Size (LxWxH): 140mm x 105mm x 50mm
- ➢ Weight: 600g
- Specifications are subject to change without notice

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